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Dual task and balance in male and female elite handball players

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ABSTRACT:

Title: Dual task and balance in male and female elite handball players

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Introduction

Female handball players are in much greater risk of getting foot, ankle or knee injuries than male players (1,2). It is currently not clear why this difference is present, but differences in balance can be a contributing factor (3). The purpose of this clinical comparative study was to compare the balance in male and female elite handball players in single and dual tasks in upright stance.

Material and Method

27 healthy elite handball players were divided into a male ($n = 13$) and a female ($n = 14$) group. The participants were tested after a physically demanding training session. The tests consisted of a motor task on a force platform, a cognitive task and finally a dual task, which was a combination of the motor and the cognitive task. Independent samples t-test was applied for the statistics comparing men and women in single and in dual task. Afterwards the data was normalised to gender, and the percentage-wise deterioration from single to dual task in the two groups were compared using independent samples t-test. Bonferroni post-hoc was applied to correct for mass significance.

Results

No significant differences were found between the two groups ($p > 0,05$).

Conclusion

Previous studies have found that men are significantly better than women in the motor task in both single and dual task, and that men have a greater deterioration than women from single to dual task (4,5). In spite of this the present study found no differences in balance between male and female elite handball players.